

**Notice of Allowability**

Application No.

10/797,466

Examiner

Zia R. Hashmi

Applicant(s)

MILLER ET AL.

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/14/2004.
2. ☒ The allowed claim(s) is/are 1-51.
3. ☒ The drawings filed on 30 December 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>4/26+8/20+12/6/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material  | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. A "Preliminary Amendment" was received on June 14, 2005. The specification has been amended, as indicated.
2. Claims 1-51 are allowed of this continuing application.
3. The following is an examiner's statement of reasons for allowance:
4. With respect to independent claims 1, 20 and 36, prior art fails to disclose method and apparatus for detection and identification of analytes in a sample based on at least an aspect of ion mobility, comprising: (a) obtaining a volatilized sample comprising markers that are detectable by ion mobility; and (b) directing at least a portion of the volatilized sample to a differential ion mobility detection spectrometry (DMS) device, to obtain a mobility-based signature of at least one marker, wherein the mobility-based signature correlates with the analytes, thereby detecting and identifying at least one analyte in the sample.
5. With respect to independent claim 43, prior art fails to disclose a field asymmetric ion mobility detection system, comprising: an input part and an output part, said input part including a volatilization part; at least a pair of spaced insulated substrates cooperating to define between them an enclosed flow path for the flow of ions from the input part to the output part; at least two electrodes opposite each other and defined in the flow path, the at least two electrodes including at least one filter electrode associated with each substrate to form an ion filter section; and an electronics part

configured to apply controlling signals to the electrodes, and the electronics part applying an asymmetric periodic signal across the filter electrodes for filtering the flow of ions in the flow path, the filter being compensated to pass desired ion species out of the filter section. And,

6. With respect to independent claim 49, prior art also fails to disclose a method of detection and identification of analytes in a sample by an ion-mobility based device, comprising: (a) directing a portion of a sample into a first separation device thereby obtaining a first profile; (b) directing a portion of a sample into a second separation device thereby obtaining a second profile, wherein at least one of the first and the second separation devices is a DMS device; and (c) combining the first and the second profiles thereby identifying at least one analyte in a sample.

Claims 2-19, 21-35, 37-42, 44-48, and 50-51 are allowed by virtue of their dependencies on the independent claims 1, 20, 36, 43, and 49.

### ***Conclusion***

7. Lovell et al. disclose (6,895,804) a system and method for detecting substances using a high energy radiation source like a laser, to vaporize the sample and detect the presence of the materials like explosives, drugs, etc., in conjunction with a detector system, like and ion mobility spectrometer.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments of Statement of Reasons for Allowance".


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9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zia Hashmi whose telephone number is (571) 272-2473. The examiner can normally be reached between 8.30 AM- 5 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477.

Zia Hashmi

August 25, 2005.

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800